Version V3
TIMBER ACOUSTIC DOORSETS



# SilentDoor Rw®



**DOOR SETS** 

# HELP SILENTDOOR SUPPORT



WORLD LAND TRUST

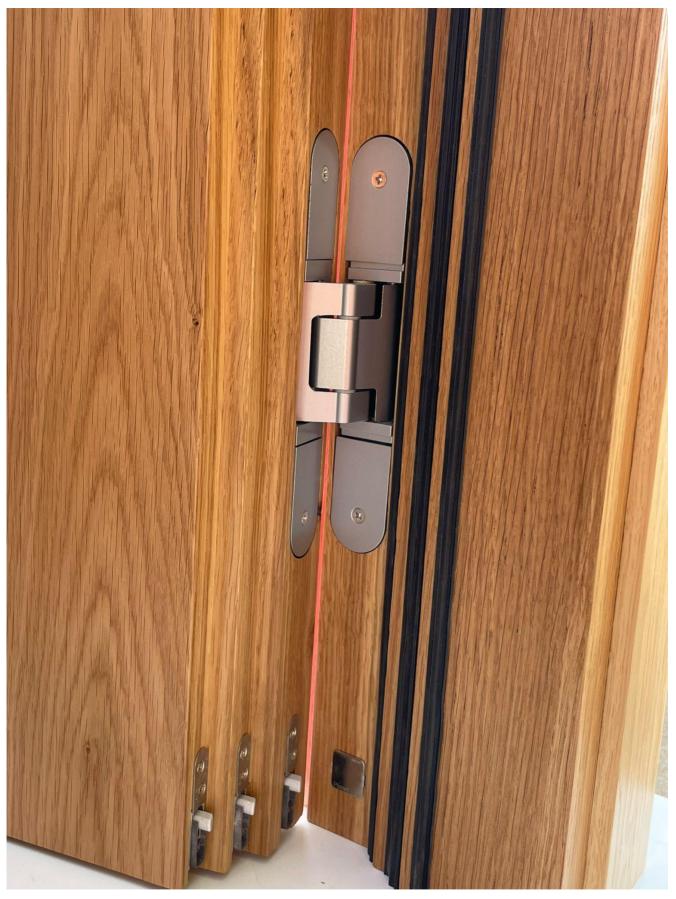
For every door you buy we will donate to World Land Trust which will purchase & protect vital rainforests and over 300 bird & mammal species.

" The money that is given to World Land Trust, in my estimation has more effect on the wild world than almost anything i can think of." Help us reach our target of **100 acres** when buying from SilientDoor

> On average £100 an acre

Sir David Attenborough





SilentDoor Rw® 55T

### SilentDoor Rw® Timber High Performing Acoustic Doorsets

### Product Datasheet.

SilentDoor Rw<sup>®</sup> Timber is available in: 35dB, 40dB, 45dB, 50dB and 55dB/60dB.

Acoustic doors of 35dB and above are supplied as complete assemblies with a frame. We can supply dual certifications against fire and most can be supplied in the veneer or laminate of your choice. When the Acoustic doors feature a vision panel a strong glass and extra sturdy seal is used to prevent sound from leaking through, so whether you want to keep noise out of a room, or prevent noise from a room escaping outside, an acoustic door is a vital addition to a number of environments.

With a variety of finishes and fire resistant ratings, these bespoke timber soundproof doors are the ideal choice for areas requiring above average levels of sound insulation and are used in recording studios, offices, schools and healthcare environments, cinemas, audiology rooms, interview rooms, offices etc, all areas where excellent sound insulation is required through a doorway and privacy is paramount.

N.B. SilentDoor Rw® Timber doorsets have 'optional' concealed hinges and door closers.

Product Name	Approx Weight kg/m²	Rated	Max Leaf Size (Single)	Max Leaf Size (Double)
SilientDoor Rw® 35T Timber	37 kg/m²	35dB	3500 H x 1290mm L	3500 H x 2580mm L
Discontinued - As of October 2024, all 35dB doors (SilientDoor Rw® 35T) will be sold as 40dB specification (SilientDoor Rw® 40T)				
SilientDoor Rw <sup>®</sup> 40T Timber	43 kg/m <sup>2</sup>	40dB	3500 H x 1290mm L	3500 H x 2580mm L
SilientDoor Rw <sup>®</sup> 45T Timber	50 kg/m²	45dB	3500 H x 1290mm L	3500 H x 2580mm L
SilientDoor Rw <sup>®</sup> 50T Timber	60 kg/m <sup>2</sup>	50dB	3500 H x 1290mm L	3500 H x 2580mm L
SilientDoor Rw <sup>®</sup> 55T Timber	74 kg/m <sup>2</sup>	55dB	3500 H x 1290mm L	3500 H x 2580mm L
SilientDoor Rw <sup>®</sup> 60T Timber	83 kg/m²	60dB	3500 H x 1290mm L	N/A Single Only

Sound transmission Loss (dB) / Sound Reduction - Rw (weighted sound reduction index - BS EN ISO 717-1)

### Doorsets Max Specifications.

	•		No VP		
Single Leaf	NFR	Ei30	Ei60	Ei90	Ei120
SilentDoor Rw® 40T					
SilentDoor Rw® 45T					
SilentDoor Rw® 50T					
SilentDoor Rw® 55T					
SilentDoor Rw® 60T					
Double Leaf	NFR	Ei30	Ei60	Ei90	Ei120
SilentDoor Rw® 40T					
SilentDoor Rw® 45T					
SilentDoor Rw® 50T					
SilentDoor Rw® 55T					
SilentDoor Rw® 60T					

		With VP			
NFR	Ei30	Ei60	Ei90	Ei120	Max VP Size
					Less 200mm around perimeter
					0.72 M2
					0.44 M2
					No VP Possible
NFR	Ei30	Ei60	Ei90	Ei120	Max VP Size
					Less 200mm around perimeter
					0.72 M2
					No VP Possible
					No VP Possible

Should you require a specification not listed, please request detailed information. Such requests will be evaluated on a case-by-case basis, with the explicit understanding that the proposed solution would not carry certification.

### High performance, versatile acoustic doorset systems.

Frequent Operation Cycle Classification	Rated
C5 (as standard with SilentDoor Rw®)	≥200,000 cycles
C4	≥100,000 cycles
C3	≥50,000 cycles
C2	≥10,000 cycles
C1	≥500 cycles
C0	1 - 499 cycles

The 'C' describes the self-closing property of the component and is derived from 'Closing'. The classes C0 to C5 define the self-closing cycles of the component. Class C5, for example, stands for very frequent operation. Class C3 stands for a moderate number of actuations mainly by persons with a certain motivation to handle with care. Class C2, for example, is widely used for fire doors: a low number of operations by persons with a high motivation for careful handling.

The 'E' in this classification is derived from 'Etanchèitè' and stands for room closure. This indicates the ability of a building component with a room-separating function to resist fire from an attacking side. The passage of fire to the non-flame side is prevented.

The 'l' (l<sub>1</sub>, l<sub>2</sub>) is derived from 'Isolation' and describes the ability of the component to limit the transmission of fire and heat to such an extent that there is no danger to persons or ignition of combustible materials on the side facing away from the fire. An average temperature rise of 140°C and a maximum temperature rise of 180°C must not be exceeded. In differs from l<sub>2</sub> in the positioning of the sensors for the surface temperature during tests. For fire doors or gates in Europe, the usual requirement is l<sub>2</sub>.

The number '60' represents the classification time of the fire doors and gates. Classification times must be given in minutes for each of the above characteristics, with classification times of (FD) 30, 60, 90 and 120 being the most common in Europe.

### Hinges.

SilientDoor Rw<sup>®</sup> standard hinge range is by **Royde & Tucker** or *INTHER* who remain at the forefront of UK hardware design and production for over 50 years and they are entirely made here in the UK and their HI-Load, Lift off hinges are available in a range of finishes.

For concealed hinges, we recommend **Tectus** by Simonswerk UK *(for most doors we use the TE 540 3D)*. This is where design meets functionality providing a completely concealed hinge system capable of load capacities of up to 300kg. An opening angle of 180 degrees with three-dimensional adjustability and 'maintenance free' slide bearing technology make this our first choice for any prestigious application.

If at all, you wish to supply your own hinges for our factory to install then please ensure that they have rounded corners that are suited for CNC router cuts.

### Finger Safety.

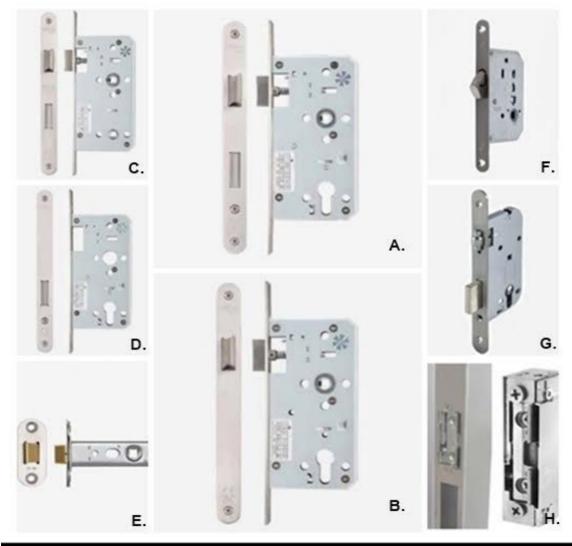
At SilientDoor we recommend the use of **Safehinge**. If you truly want to prevent fingers from being trapped in the gap at the hinge edge of a door then it's wise to eliminate the gap. The Safehinge **Alumax** incorporates a rounded aluminium profile to maintain a gap of just 2mm so that small fingers simply can't get in there. The ALU30 and the ALU60 is suitable for a fire rated door specification.

### Threshold.

All of our SilientDoor Rw<sup>®</sup> timber range acoustic door leafs incorporate an automatic drop seal that will offer maximum performance if an aluminium threshold is fitted during installation. It is important to consider these where there are existing soft floor coverings or an uneven or rough floor surface. At SilientDoor we would recommend **Cayrus** aluminium thresholds.

# SilentDoor Rw® Timber Locking Types

**NOTE**: Every acoustic door necessitates a specific locking mechanism to guarantee both acoustic and fire protection. This locking mechanism is essential for drawing the door leaf tightly against the door frame, ensuring a secure seal. Doors that omit this feature pose the risk of inadequate sealing, jeopardising their protective and performance capabilities, which is not recommended - however possible with closers.



### Lock Types for SilentDoor Rw® T - Timber Door Sets

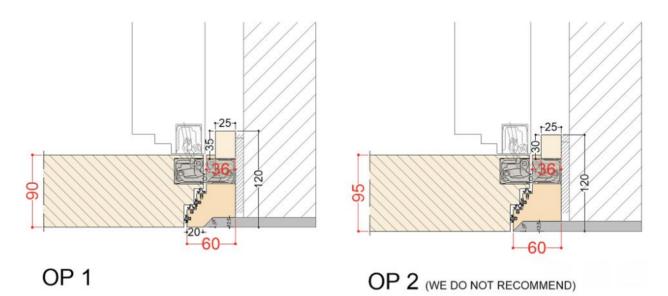
А	Sash Lock (Latch with Cylinder) With Lever Handle	
В	Latch Case (Only latch) With Lever Handle	
С	Bathroom Lock (Thumb Turn With Latch) With Lever Handle	
D	Deadlock (Only Cylinder) No Lever Handle	
E	Thumb Turn (Only Thumb) No Handle	Not Suitable for Fire/Acoustic Doors
F	Parrot Beak (For Sliding Doors)	Not Suitable for Fire/Acoustic Doors
G	Roller Lock (Roller Latch) Pull/Push Handle	Not Suitable for Fire/Acoustic Doors
Н	Electric Strike (Has To Be Complemented By A or B)	
I	Concealed MagLock	



**Example Details** 

### Frequently asked details:

1.Detail of flush door



OP2) **DO NOT RECOMMEND IT**. Apart from that the edge is vulnerable and possibly can break under a small impact, also the connection of concrete and wood frame will probably not end up clean and long lasting.

### 2. Suitable structure fittings

A double timber stud frame is typically sufficient for our doors if constructed with high-quality materials and proper reinforcement. However, for enhanced stability and durability, some customers opt for a C-section steel frame.

In either case, it's essential to create a "rugby post" configuration by securely connecting the frame to both the floor and the ceiling. Ideally, these posts should be anchored to structural elements, such as a concrete floor and a concrete soffit, to ensure maximum load distribution and long-term stability.

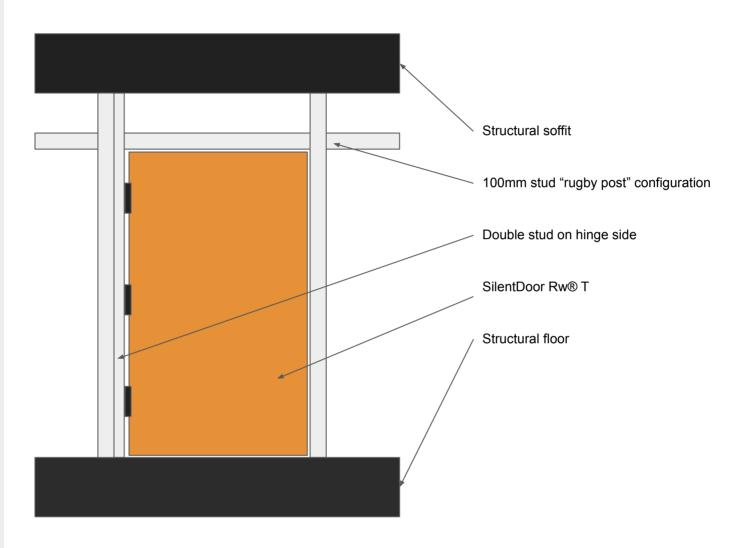
### Reference:

Single timber stud is recommended - horizontal noggins, brackets, securing to structural elements	Under 100kg
Double timber stud is recommended - horizontal noggins, brackets, securing to structural elements	Up to 150kg
C-Section Steel frame is recommended - anchored to solid structural elements	Over 150kg

Product Name	Approx Weight kg/m²	Single Door 2100*900 (1.89sqm)	Double Door 2100*1500 (3.15sqm)
SilientDoor Rw <sup>®</sup> 40T Timber	43 kg/m <sup>2</sup>	81.27 kg	135.45 kg
SilientDoor Rw® 45T Timber	50 kg/m²	94.5 kg	157.5 kg
SilientDoor Rw <sup>®</sup> 50T Timber	60 kg/m²	113.4 kg	189 kg
SilientDoor Rw® 55T Timber	74 kg/m <sup>2</sup>	139.86 kg	233.1 kg



### **Recommended Wall Detail**



The wall detail provided is for illustrative purposes only and does not constitute design advice. SilentDoor assumes no responsibility or liability for the design, adequacy, or structural integrity of the wall construction, which remains the sole responsibility of the client's appointed structural engineer.

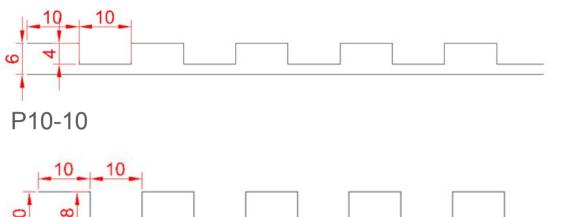


Example Details

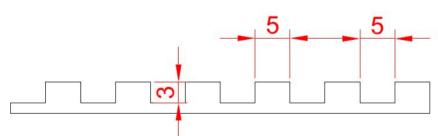
### Frequently asked details:

3.Detail of slatted design

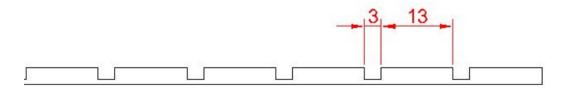
P10-6



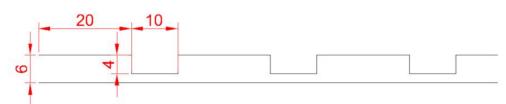




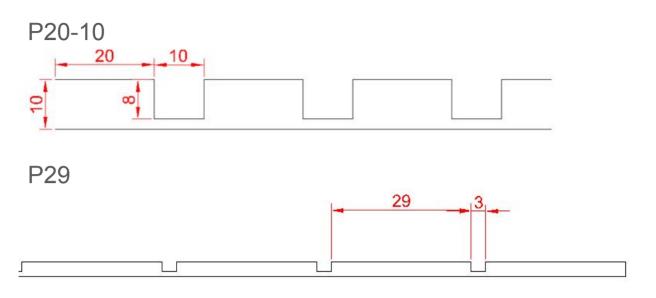
P13



P20-6



**Example Details** 



4.How do the doors compare?

**Sound Reduction and Decibels (dB)**: Every 3 dB increase in sound reduction does indeed represent a doubling or halving of sound energy. However, when you combine two doors (or any two sound barriers), their sound insulation properties do not simply add up linearly in terms of decibels. Instead, the combination effect is more complex.

As an example for this, let compare the SilentDoor RW® 45T and SilentDoor RW® 50T.

- **Two identical doors** (such as two SilentDoor RW® 45T doors) would not double the sound reduction. The combined reduction would be **approximately 3 dB higher** than the reduction of one door. So, if one RW® 45T door provides 45 dB of sound reduction, two of them would give a combined reduction of **48 dB** (a 3 dB increase).
- SilentDoor RW® 45T and RW® 50T: A single RW® 50T door, offering 50 dB of sound reduction, would indeed be more effective than two RW® 45T doors, because it provides a higher level of sound isolation with a single unit. Therefore, a single RW® 50T door would outperform two RW® 45T doors, even if those two provide a total of 48 dB, because 50 dB blocks more sound than 48 dB.

So, to summarise

- Two SilentDoor RW® 45T doors would achieve approximately **48 dB** of sound reduction (3 dB more than one door).
- A single SilentDoor RW® 50T door provides **50 dB** of sound reduction, which is greater than the 48 dB from two 45T doors.

Thus, a single RW® 50T door provides better sound insulation than two RW® 45T doors combined. The core concept remains that every 3 dB increase signifies a noticeable improvement in sound isolation, but the actual increase from combining two doors is only around 3 dB, not a doubling of the sound reduction.

# SilentDoor Rw® 35T - Timber

### High Performing Acoustic Doorsets

Discontinued - As of October 2024, all 35dB doors will be sold as 40dB

SilentDoor Rw® 35T has a tri-layer acoustic core with an overall finished thickness of 50mm. The inner core and solid perimeter/structural rails are manufactured incorporating acoustically insulating materials and finished with that all important outer skin. Each leaf is then single rebated to top and sides creating a tight seal. To the bottom of each leaf is an automatic drop seal. A 'Metal Frame' option is available for this doorset.

Suitable applications (recommendations are as follows)

SilentDoor Rw® 35T is ideally suited for Hotels, Schools & Universities, Auditoriums and Classroom environments.

## Wide range of veneers, selection of laminates, or factory-finished to any RAL colour.

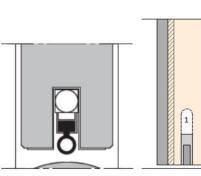
**Custom Finishings** (Veneered / Painted / Primed)

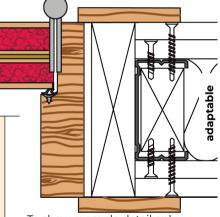


### Sections (Door, frame and threshold)

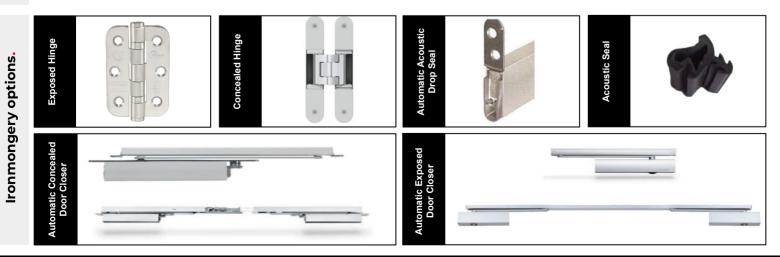
- 50mm thick door leaf with solid perimeter frame.
- 50mm thick door leaf with optional metal perimeter frame.
- Double Rebated doors (Three slides).
- Core constructed from timber and acoustic insulation materials.
- Frame made of solid wood, with MDF or plywood base.
- Glazed elements can be incorporated.
- Mechanical drop seal.







To show example detail only.



### SILENTDOOR Open the doors to endless possibilities

# SilentDoor Rw® 40T - Timber

### High Performing Acoustic Doorsets

SilentDoor Rw® 40T has a tri-layer acoustic core with an overall finished thickness of 55mm. The inner core and solid perimeter/structural rails are manufactured incorporating acoustically insulating materials and finished with that all important outer skin. Each leaf is then single rebated to top and sides creating a tight seal. To the bottom of each leaf is an automatic drop seal.

A 'Metal Frame' option is available for this doorset.

### Suitable applications (recommendations are as follows)

SilentDoor Rw® 40T is ideally suited for Hospitals, Small Music Rooms, Auditoriums and Recording Studio environments.

### Wide range of veneers, Selection of laminates, or Factory-finished to any RAL colour.

Custom Finishings (Veneered / Painted / Primed)

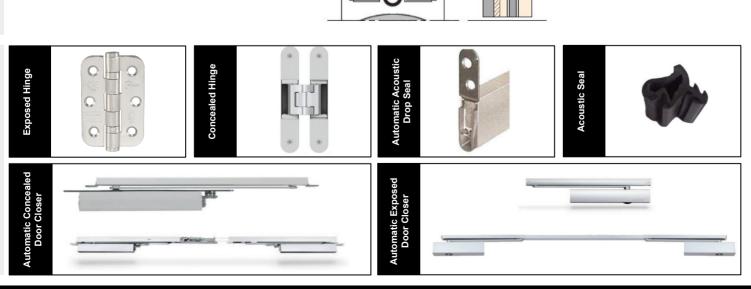


adaptable

### Sections (Door, frame and threshold)

- 55mm thick door leaf with solid perimeter frame.
- 60mm thick door leaf with optional concealed hinge.
- Double Rebated doors (Three slides).
- Core constructed from timber and acoustic insulation materials.
- Frame made of solid wood, with MDF or plywood base.
- Glazed elements can be incorporated.
- Mechanical drop seal.

### EN 1634-1 EN 1634-1



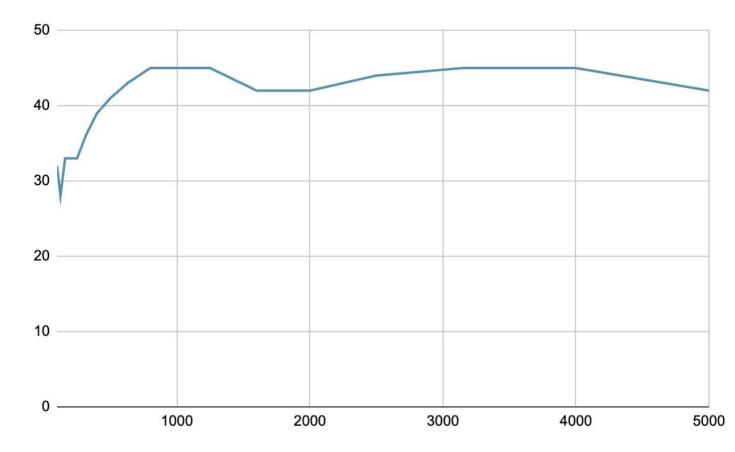
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To show example detail only.



# SilentDoor Rw® 40T - Timber

Sound Reduction Index (SRI)



Frequency (Hz)	R (dB)
100	32.0
125	28.0
160	33.0
200	33.0
250	33.0
315	36.0
400	39.0
500	41.0
630	43.0
800	45.0
1000	45.0
1250	45.0
1600	42.0
2000	42.0
2500	44.0
3150	45.0
4000	45.0
5000	42.0

### Specification

• 55mm thick door leaf with solid perimeter frame

• Core constructed from timber and acoustic insulation materials

• Frame made of solid wood, with MDF or plywood base

• Glazed elements can be incorporated

Wide range of veneers, Selection of laminates, or Factory-finished to any RAL colour.

### EN 1634-1 EN 1634-1

### Ironmongery options

• Range of items available, specific items may need to be assessed

- Standard, lift-off or invisible hinges
- Standard or hidden automatic door closers

Overall weighted sound reduction index A, R: ≥40dBA

Overall sound reduction index, Rw (C 100-5000, Ctr, 100-5000)

### SILENTDOOR Open the doors to endless possibilities

# SilentDoor Rw® 45T - Timber

### High Performing Acoustic Doorsets

SilentDoor Rw® 45T has a tri- layer acoustic core with an overall finished thickness of 65mm (45Rw). The inner core and solid perimeter/structural rails are manufactured incorporating acoustically insulating materials and finished with that all important outer skin. Each leaf is then double rebated to top and sides creating a twin seal, to the bottom of each leaf is a drop seal.

A 'Metal Frame' option is available for this doorset.

Suitable applications (recommendations are as follows)

SilentDoor Rw® 45T is ideally suited for large Music Rooms and Conference Rooms.

### Wide range of veneers, selection of laminates, or factory-finished to any RAL colour.

### Custom Finishings (Veneered / Painted / Primed)



adaptable

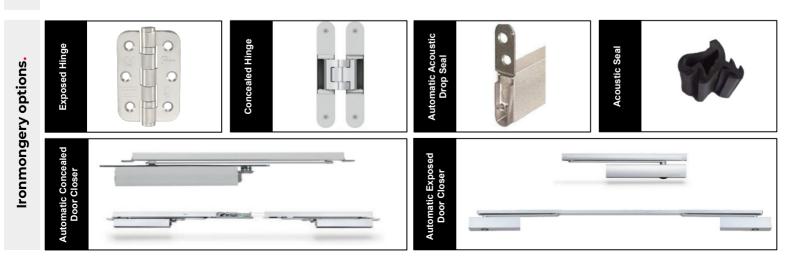
To show example detail only.

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### Sections (Door, frame and threshold)

- 65mm thick door leaf with solid perimeter frame.
- 70mm thick door leaf with optional concealed hinge.
- Double Rebated doors (Three slides).
- Core constructed from timber and acoustic insulation materials.
- Frame made of solid wood, with MDF or plywood base.
- Glazed elements can be incorporated.
- Mechanical drop seal.

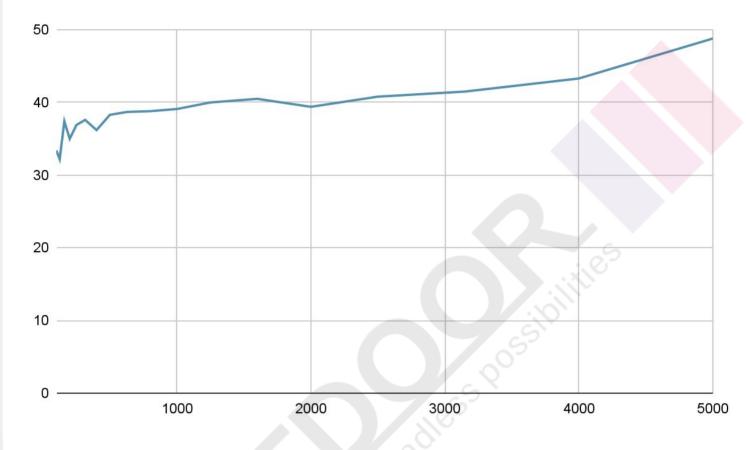
### EN 1634-1 EN 1634-1





# SilentDoor Rw® 45T - Timber

Sound Reduction Index (SRI)



Frequency (Hz)	R (dB)
100	33.4
125	32.2
160	37.4
200	35
250	36.9
315	37.6
400	36.2
500	38.3
630	38.7
800	38.8
1000	39.1
1250	40.0
1600	40.5
2000	39.4
2500	40.8
3150	41.5
4000	43.3
5000	48.8

### Specification

- 65mm thick door leaf with solid perimeter frame
- Core constructed from timber and acoustic insulation materials
- Frame made of solid wood, with MDF or plywood base
- Glazed elements can be incorporated

Wide range of veneers, Selection of laminates, or Factory-finished to any RAL colour.

### EN 1634-1 EN 1634-1

### Ironmongery options

- Range of items available, specific items may need to be assessed
- Standard, lift-off or invisible hinges
- Standard or hidden automatic door closers

Overall sound reduction index, Rw (C 100-5000, Ctr, 100-5000)

Overall weighted sound reduction index A, R:

≥45dBA

### SILENTDOOR Open the doors to endless possibilities

# SilentDoor Rw® 50T - Timber

### High Performing Acoustic Doorsets

SilentDoor Rw® 50T has a tri- layer acoustic core with an overall finished thickness of 70mm. The inner core and solid perimeter/structural rails are manufactured incorporating acoustically insulating materials and finished with that all important outer skin. Each leaf is then double rebated to top and sides creating a twin seal, to the bottom of each leaf is a drop seal.

A 'Metal Frame' option is available for this doorset.

Suitable applications (recommendations are as follows)

SilentDoor Rw® 50T are ideally suited for Recording Studios and Concert Halls.

### Wide range of veneers, selection of laminates, or factory-finished to any RAL colour.

### Custom Finishings (Veneered / Painted / Primed)



adaptable

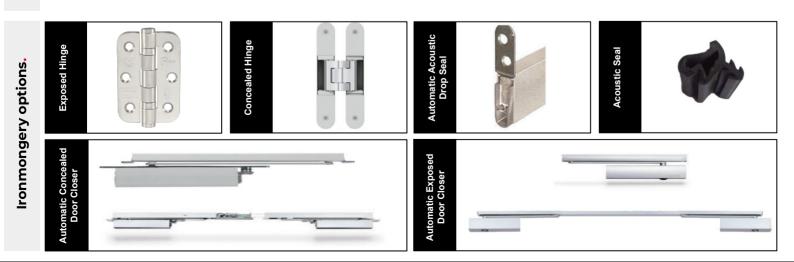
To show example detail only.

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### Sections (Door, frame and threshold)

- 70mm thick door leaf with solid perimeter frame.
- 75mm thick door leaf with optional concealed hinge.
- Double Rebated doors (Three slides).
- Core constructed from timber and acoustic insulation materials.
- Frame made of solid wood, with MDF or plywood base.
- Glazed elements can be incorporated.
- Mechanical drop seal.

### EN 1634-1 EN 1634-1



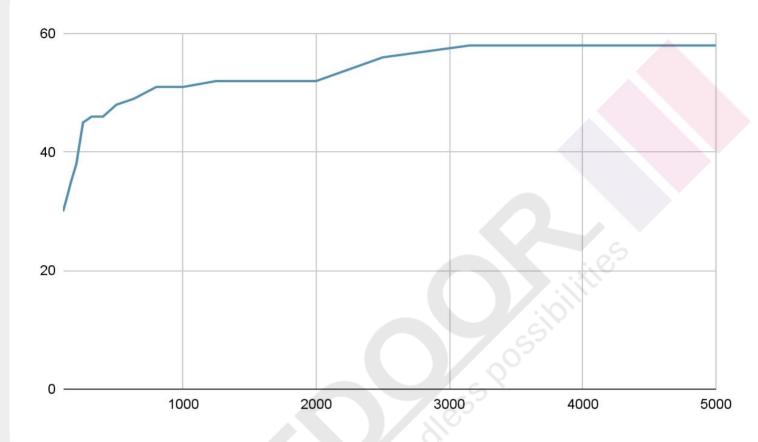
Description.

Specification.



# SilentDoor Rw® 50T - Timber

Sound Reduction Index (SRI)



Frequency (Hz)	R (dB)
100	30.0
125	32.0
160	35.0
200	38.0
250	45.0
315	46.0
400	46.0
500	48.0
630	49.0
800	51.0
1000	51.0
1250	52.0
1600	52.0
2000	52.0
2500	56.0
3150	58.0
4000	58.0
5000	58.0

### Specification

- 70mm thick door leaf with solid perimeter frame
- Core constructed from timber and acoustic insulation materials
- Frame made of solid wood, with MDF or plywood base
- Glazed elements can be incorporated

Wide range of veneers, Selection of laminates, or Factory-finished to any RAL colour.

### EN 1634-1 EN 1634-1

### Ironmongery options

- Range of items available, specific items may need to be assessed
- Standard, lift-off or invisible hinges
- Standard or hidden automatic door closers

Overall weighted sound reduction index A, R: ≥50dBA Overall sound reduction index, Rw

(C100-5000, Ctr, 100-5000)

52 (0; -1) dB

# Open the doors to endless possibilities

# SilentDoor Rw® 55T - Timber

### High Performing Acoustic Doorsets

SilentDoor Rw® 55T has a tri-layer acoustic core with an overall finished thickness of 80mm. The inner core and solid perimeter/structural rails are manufactured incorporating acoustically insulating materials and finished with that all important outer skin. Each leaf is then double rebated to top and sides creating a twin seal, to the bottom of each leaf is a drop seal.

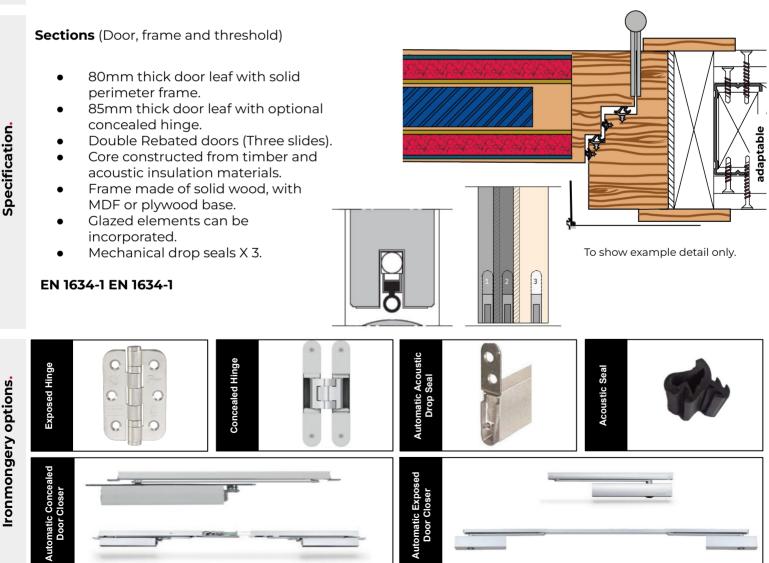
A 'Metal Frame' option is available for this doorset.

### Suitable applications (recommendations are as follows)

SilentDoor Rw® 55T is ideally suited for Audiology Rooms, Testing Environments, Film Studios, Theatres and Cinemas.

### Wide range of veneers, Selection of laminates, or Factory-finished to any RAL colour. Custom Finishings (Veneered / Painted / Primed)

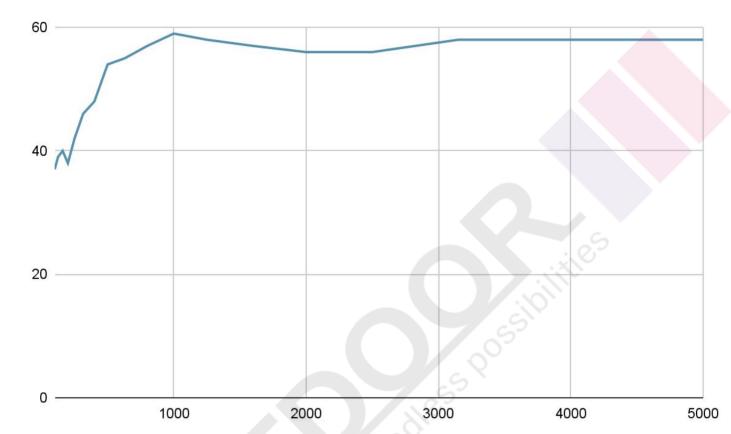






# SilentDoor Rw® 55T - Timber

Sound Reduction Index (SRI)



Frequency (Hz)	R (dB)
100	37.0
125	39.0
160	40.0
200	38.0
250	42.0
315	46.0
400	48.0
500	54.0
630	55.0
800	57.0
1000	59.0
1250	58.0
1600	57.0
2000	56.0
2500	56.0
3150	58.0
4000	58.0
5000	58.0

### Specification

- 85mm thick door leaf with solid perimeter frame
- Core constructed from timber and acoustic insulation materials
- Frame made of solid wood, with MDF or plywood base
- Glazed elements can be incorporated

Wide range of veneers, Selection of laminates, or Factory-finished to any RAL colour.

### EN 1634-1 EN 1634-1

### Ironmongery options

- Range of items available, specific items may need to be assessed
- Standard, lift-off or invisible hinges
- Standard or hidden automatic door closers

Overall weighted sound reduction index A, R:	≥55dBA
Overall sound reduction index, Rw (C 100-5000, Ctr, 100-5000)	57 (0; -1) dB

# Open the doors to endless possibilities

# SilentDoor Rw® 60T - Timber

### High Performing Acoustic Doorsets

SilentDoor Rw® 60T has a tri- laver acoustic core with an overall finished thickness of 80mm. The inner core and solid perimeter/structural rails are manufactured incorporating acoustically insulating materials and finished with that all important outer skin. Each leaf is then double rebated to top and sides creating a twin seal, to the bottom of each leaf is a drop seal.

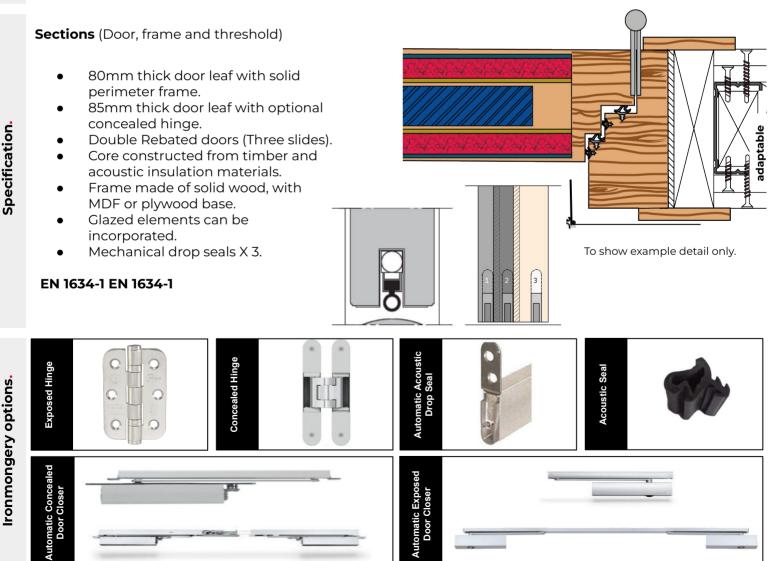
A 'Metal Frame' option is available for this doorset.

### Suitable applications (recommendations are as follows)

SilentDoor Rw® 60T is ideally suited for Audiology Rooms, Testing Environments, Film Studios, Theatres and Cinemas.

### Wide range of veneers, Selection of laminates, or Factory-finished to any RAL colour. Custom Finishings (Veneered / Painted / Primed)





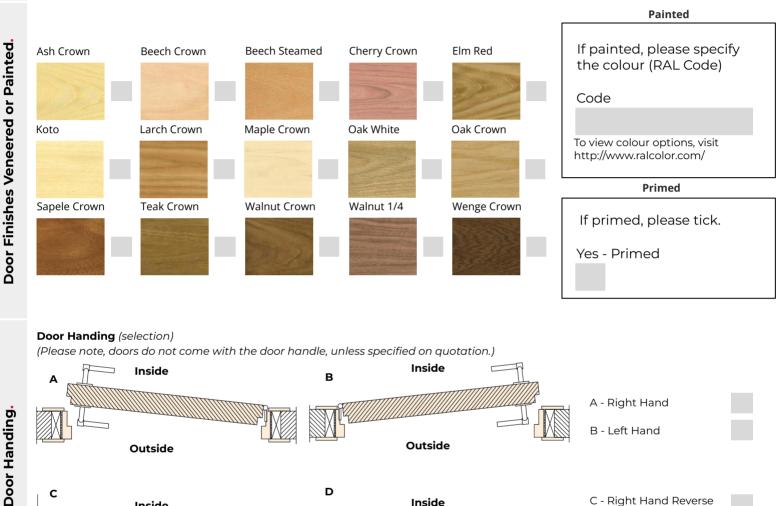


# SilentDoor Rw® Timber Specification

Acoustic Doorset Specification List

As all our doors are made to measure, we just need to make sure we take all the relevant info to make sure you get the right door.

### To help us finalise your door specification, please take time to complete the below and following page.

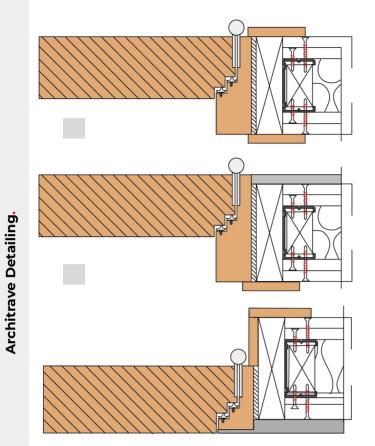


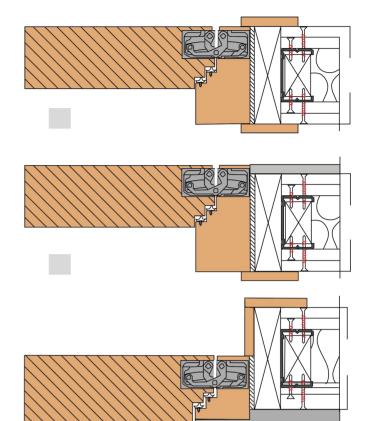
D C - Right Hand Reverse Inside Inside D - Left Hand Reverse Outside Outside Single Leaf Measurements (of door and frame i.e structural opening) Width Height Diagonal Double Leaf

Specification.

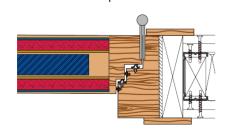


Architraves

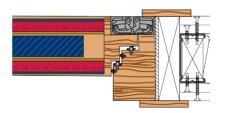




### Hinge (Exposed or concealed hinge) Exposed

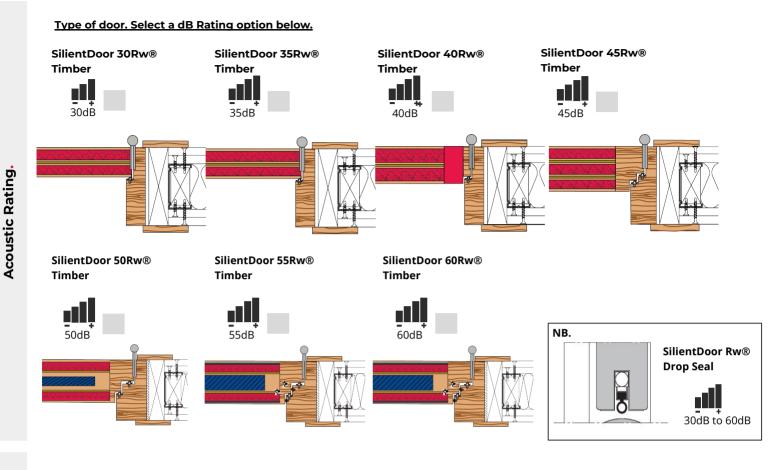


Concealed



Exposed

Concealed



### Type of door. Select a Fire Rating option below.



Final Sign Off	
Signature.	
	Name.
Date.	Email.
Quantity of doors at this specification	Tel.
How many doors at this	Notes.
spec?	